REMARKS

Claims 1-28 were pending. Claims 1-28 rejected under 35 USC §103 as obvious by Pickett or Pickett in view Hall et al. In light of the amendments and the following remarks, the undersigned requests withdrawal of the rejections.

Numerous amendments have been made to the claims for what the undersigned believes reflects better grammar and for correction of typographical errors. Such amendments should not be construed as amendments for purposes of patentability.

I. The Present Invention

The present invention relates to a telephone communications interface for a computer that provides electrical power to attached telephones.

As disclosed in the embodiments in the specification and in the figures, the operational voltage supplied to an attached telephone is different depending upon the source of the telephone call. If the phone call is a DID telephone call, step 540, a first operational voltage is supplied to power the telephone, step 550, Fig. 4. If the phone call in an internal phone call, step 560, a second operational voltage is supplied to power the telephone, step 570.

As also disclosed in the embodiments in the specification and in Fig. 7, a -90 volt ringing signal is applied to only one of the phones 940, 950, and 960, at a time. As can be seen, in this example, the -90 volt peak signal is first provided to phone 940, then to phone 950, then to phone 960, then it repeats. The rationale for this feature is given in an example in the specification. Specifically, in an example where a maximum of twelve telephone handsets can be coupled to the telephone server 70 at one time, by using the above functionality, the ringer drive circuit needs to only support ringing of four telephones at a time. P. 16, lines 18-22. Accordingly, the amount of power required by the transformer circuit is smaller and, the transformer circuit can be smaller. A smaller transformer circuit would thus free-up valuable real-estate on a plug-in telephone server 70.

Claim 18 recites, a method including, among other limitations, generating a first operational drive voltage for a telephone from the plurality of telephones within the telecommunications interface when a call directed to the telephone is a directly dialed call from the telephone trunk, and generating a second operational drive voltage for the telephone within the telecommunications interface when the call directed to the telephone is an internally dialed call from another telephone of the plurality of telephones.

Claim 1 recites, a method including, among other limitations, generating direct inward dialing power in response to the primary voltage, the direct inward dialing power configured to provide a first operational voltage for telephones from the maximum number of telephones, when the telephones receive telephone calls directly from the telephone trunk, generating second operational voltage in response to the primary voltage for the telephones from the maximum number of telephones, when the telephones receive telephone calls from other telephones from the maximum number of telephones. Claim 1 also recites, generating a ringing signal in response to the ringer power and to the secondary voltage, wherein a peak voltage of the ringing signal is provided to no more than approximately one half of the maximum number of telephones at a time.

II. The Cited Reference

A. Pickett

Pickett appears to disclose of a system 50 including voice and data services.

The Examiner cites Col. 6, line 62-col. 7, line 11 and Col. 32, lines 41-61 as teaching a first operational drive voltage for a telephone and a second operational drive voltage for the telephone. Upon review of these sections, the undersigned respectfully traverses these assertions.

Specifically, col. 6, line 62 et seq. merely discusses a number of networks the system 50 may be coupled to. Further, col. 32, lines 41-61 merely describes some of the standards system 50 may be coupled to. Notably, on col. 32, line 60-65, Pickett notes

that only ONE operating voltage is provided to telephones. Specifically, Pickett discloses:

> (4) Analog station cards – 12- and 24-port versions available; Supports standard and enhanced analog phones with features such as enhanced caller ID display and message-waiting lamp; Operating voltage: Onhook – 48 V, Offhook –24V. Col. 32, lines 60-65. Emphasis added.

The Examiner appears to agree that Pickett does not explicitly specify a different drive voltage for a internally dialed call. However, the Examiner states that it would have been well known in the art. The undersigned challenges this as the Examiner has not given any basis why one of ordinary skill in the art would have recognized that two different operating voltages would be useful. Since system 50 provides operational voltage to each telephone, why not simply drive a phone at a low voltage to save power, regardless of the source of the call? This question, and others are not answered by the Examiner. Without further support, the Examiner's assertion cannot stand.

In sum, Pickett appears to include analog station cards that power telephones with a single offhook voltage.

B. Hall

Hall appears to disclose an apparatus for a digital multiplexed telephone communication system for generating a ring signal for use on party lines.

Hall discloses a common ringing signal is supplied to EACH telephone on a party line. However, not all phones ring at the same time, because the ringing signal is provided at different frequencies, and that each phone is responsive to different ringing frequency. In particular, Hall discloses:

> That is, up to five phones may be simultaneously connected to a particular party line. Each phone on the line may be made responsive to a

ringing signal of a different frequency, such as by a band pass filter. Col. 20, lines 51-57.

In sum, Hall discloses providing a ringing signal to all commonly coupled telephones, and having individual telephones ring only when specific ringing frequencies are provided.

III. Cited Reference Distinguished

In response to the rejections of claims 1-28 as being obvious in light of Pickett and in light of Pickett in view of Hall, the undersigned respectfully traverses these rejections and the Examiner's assertions.

A. Claim 18

Pickett does not disclose, teach, or suggest all the limitations of Claim 18 to one of ordinary skill in the art. For example, Pickett does not disclose generating a first operational drive voltage for a telephone from the plurality of telephones within the telecommunications interface when a call directed to the telephone is a directly dialed call from the telephone trunk, and generating a second operational drive voltage for the telephone within the telecommunications interface when the call directed to the telephone is an internally dialed call from another telephone of the plurality of telephones.

As disclosed above, the Examiner admits that Pickett does not teach using two different operational voltages. Furthermore, the only disclosure that gives a rationale for using two different operational voltages is the present patent application. The Examiner has not given a reason why one of ordinary skill in the art would have even asked the hypothetical question he asked, or why the solution invented herein would be the only solution to the hypothetical question. Without further rational, it can be assumed that the Examiner is using impermissible hindsight to fill-in the gaps.

Thus in sum, Pickett does not teach at least the above limitation of claim 18 to one of ordinary skill in the art. Claim 18 is therefore asserted to be allowable for at least this reason.

B. Claim 1

Pickett and Hall do not disclose, teach, or suggest all the limitations of Claim 1. For example, neither reference discloses generating direct inward dialing power in response to the primary voltage, the direct inward dialing power configured to provide a first operational voltage for telephones from the maximum number of telephones, when the telephones receive telephone calls directly from the telephone trunk, generating second operational voltage in response to the primary voltage for the telephones from the maximum number of telephones, when the telephones receive telephone calls from other telephones from the maximum number of telephones.

As disclosed above, Pickett makes no mention about providing two operational voltages, as recited. Further, the Examiner uses impermissible hindsight to provide the missing elements.

Further, Hall does not disclose generating a ringing signal in response to the ringer power and to the secondary voltage, wherein a peak voltage of the ringing signal is provided to no more than approximately one half of the maximum number of telephones at a time.

As discussed above, in Hall, ringing signals for all telephones are provided to all telephones phones all of the time. That is, peak voltages of a ringing signal for common party line telephones 1-4 are provided to telephone 1; ringing signals for telephones 1-4 are provided to telephone 2; and so on. As also discussed above, Hall relies upon each telephone to filter-out the ringing signals not meant for it, and only to ring on signals meant for it. Accordingly, in the example above, telephone 1 filters-out the ringing signal voltages it receives for telephones 2-4. What this implies is that a ringing circuit has to be large enough to put out ringing signal voltages to all party-line

telephones. In contrast, the claim recites the peak voltage is provided to no more than approximately one half of the maximum number of telephones at a time.

Additionally, there is no motivation to combine Pickett and Hall. Merely because two references are in the same general endeavor, the Examiner cannot simply pick two references out of thin air and assert they should be combined. The Examiner must demonstrate that there is a motivation to combine these references. This critical demonstration is lacking. Furthermore it is not clear that Hall could actually be combined with Pickett, because the disclosure in Hall relates to multiple telephones on a multi-party line. Neither Pickett nor the present invention appear to discuss multi-party line issues.

Because Pickett and Hall fail to disclose at least the above limitations of claim 1. Claim 1 is therefore asserted to be allowable.

C. Remaining claims

Claim 1 is asserted to be allowable for the above reasons. Claims 2-8 dependent on claim 1, are also asserted to be allowable for similar reasons as claim 1 and more specifically for the additional limitations they recite.

Claim 9 is asserted to be allowable for substantially the same reasons as claim 1 and for the specific limitations it recites. Claims 10-17, dependent from claim 9, are also asserted to be allowable for similar reasons as claim 9 and more specifically for the additional limitations they recite.

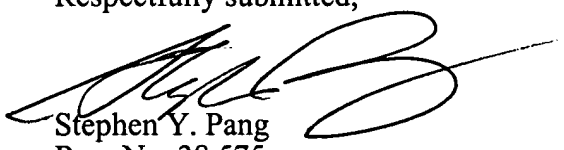
Claim 18 is asserted to be allowable for the above reasons among others. Claims 19-28 dependent from claim 18, are also asserted to be allowable for similar reasons as claim 18 and more specifically for the additional limitations they recite.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A method for providing power within a telephone server coupled to a computer system via an interface bus, to a maximum number of telephones, and to a telephone trunk, the computer system providing a primary voltage and a secondary voltage, the method including:

receiving the primary voltage and the secondary voltage from the computer system;

[providing] generating ringer power in response to the primary voltage;

[providing] generating direct inward dialing power in response to the primary voltage, the direct inward dialing power configured to provide a first operational [power] voltage for telephones from the maximum number of telephones, when the telephones [receiving] receive telephone calls directly from the telephone trunk;

[providing] generating second operational [power] voltage in response to the primary voltage for the telephones from the maximum number of telephones , when the telephones [receiving] receive telephone calls from other telephones from the maximum number of telephones; and

[providing] generating a ringing signal in response to the ringer power and to the secondary voltage;

wherein a peak voltage of the ringing signal [the ringer power powers ringers of] is provided to no more than approximately one half of the maximum number of telephones at a time.

2. (Amended) The method of claim 1 further comprising:

[providing] generating an indicator light signal in response to the primary voltage,

wherein a peak voltage of the indicator light signal [for powering indicator lights of] is provided to no more than approximately a half of the maximum number of telephones at a time.

3. (Amended) The method of claim 1 further comprising:

wherein the indicator light signal [applied to an indicator light] has a duty cycle of approximately 50 percent.

4. (Amended) The method of claim 1 further comprising:

[providing] generating indicator light [power] voltage in response to the primary voltage [,] ;

wherein a peak voltage of the indicator light [power] voltage [for powering indicator lights of] is provided to no more than approximately a quarter of the maximum number of telephones at a time.

5. (Amended) The method of claim 1 wherein the ringing signal [s also in response to a ring enable signal and] has a duty cycle of approximately 33 percent.

6. (Amended) The method of claim 5 wherein a peak voltage of the ringing signal [the ringer power powers ringers of] is provided to no more than approximately one third of the maximum number of telephones at a time.

7. The method of claim 1 wherein the first operational voltage is approximately twice the second operational voltage.

8. The method of claim 1 further comprising:

loading driver software for the telephone server on the computer system; and

configuring the telephone server with the driver software, before providing the ringer power.

9. (Amended) A telephone server coupled to a computer system via a computer bus, configured to provide output power and signals to a plurality of telephones, and to a telephone trunk, the computer system providing a primary voltage and a secondary voltage, the telephone server comprising:

a transformer circuit configured to receive the primary voltage and to provide first operational power in response to the primary voltage signal, to provide second operational power in response to the primary voltage, and to provide ringer power in response to the primary voltage, the first operational power [for providing] configured to power [to] telephones [receiving] that receive telephone calls from the telephone trunk, the second operational power [for providing] configured to power [to] telephones [receiving] that receive telephone calls from other telephones of the plurality of telephones; and

ringer circuitry coupled to the transformer circuit configured to receive the ringer power, to receive the second voltage, and to provide [e] a ringing signal in response thereto;

wherein the [transformer circuit] ringer circuitry is configured to [provides the ringer power] provide a peak voltage of the ringer power to [for] no more than approximately one half a maximum number of telephones [coupleable] that may be coupled to the telephone server at a time.

10. (Amended) The telephone server of claim 9

wherein the transformer circuit is also configured to provide an indicator light power in response to the primary voltage, and

wherein [the transformer circuit provide] indicator light circuitry is configured to [the indicator light power for] provide a peak voltage of the indicator light

power to no more than approximately one quarter the maximum number of telephones [coupleable to the telephone server at a time] .

11. (Amended) The telephone server of claim 10 [further comprising] wherein the indicator light circuitry [coupled to the transformer circuit] is configured to provide an indicator light signal in response to the indicator light power, wherein the indicator light signal [having] is configured to have a duty cycle of less than approximately 25 percent.

12. (Amended) The telephone server of claim 9 further comprising:

wherein the transformer circuit is also configured to provide [an] the indicator light power in response to the primary voltage, and

wherein [the transformer circuit provides the indicator light power for] indicator light circuitry is configured to provide a peak voltage of the indicator light power to no more than approximately one half the maximum number of telephones [coupleable to the telephone server at a time] .

13. (Amended) The telephone server of claim 9

wherein the ringer circuitry is also configured to receive a ring enable signal; and

wherein the ringing signal [has] is configured to have a duty cycle of less than approximately 33 percent.

14. (Amended) The telephone server of claim 13 wherein the [transformer circuit] ringer circuitry is configured to [provides] provide the ringer signal [for] to no more than approximately one third the maximum number of telephones [coupleable to the telephone server at a time] .

15. The telephone server of claim 9 wherein the first operational voltage is greater than the second operational voltage.

16. The telephone server of claim 15 wherein the first operational voltage is approximately twice the second operational voltage.

17. The telephone server of claim 9 further comprising:

wherein the transformer circuit is also configured to receive an enabling signal from the computer system; and

wherein the transformer circuit is also configured to provide the first operational power in response to the enabling signal.

18. (Amended) A method for a telecommunications interface for providing drive voltages for a plurality of telephones coupled thereto, the telecommunications interface also coupled to a computer system, the computer system providing a first drive voltage and a second drive voltage to the telecommunications interface, the method including:

receiving an enabling signal for the telecommunications interface from the computer system;

[providing] generating a ringing drive voltage [with] within the telecommunications interface in response to the first drive voltage and to the enabling signal;

[providing] generating a first operational drive voltage for a telephone from the plurality of telephones within the telecommunications interface when a call directed to the telephone is a directly dialed call from the telephone trunk [is for the telephone] ;

[providing] generating a second operational drive voltage for the telephone within the telecommunications interface when the call directed to the telephone

is an internally dialed call from another telephone of the plurality of telephones [is for the telephone]; and

[providing a ring signal for the telephone in response to the ringing drive voltage, and to] providing the second operational drive voltage to the telephone when the call is an internally dialed call [is for the telephone].

19. (Amended) The method of claim 18 [wherein providing the ring signal for the telephone is also in response to] further comprising: providing the first operational drive voltage to the telephone when the call is a directly dialed call [is for the telephone].

20. (Amended) The method of claim 18 wherein [providing a] the first operational drive voltage for the telephone is generated [also] in response to the enabling signal.

21. (Amended) The method of claim 20 wherein [providing a] the second operational drive voltage for the telephone is generated [also] in response to the enabling signal.

22. (Amended) The method of claim 18 further comprising:

[providing] generating an indicator light drive voltage within the telecommunications interface in response to the primary voltage [and to the enabling signal] .

23. (Amended) The method of claim 22

wherein a maximum number of telephones from the plurality of telephones [is a maximum number of telephones that] can be coupled to the telecommunications interface; and

wherein a peak voltage of the indicator light drive voltage [powers] is provided to [indicator lights of] no more than approximately one half of the maximum number of telephones at a time.

24. (Amended) The method of claim 23 wherein the peak voltage of the indicator light drive voltage is provided to [powers indicator lights of] no more than approximately one quarter of the maximum number of telephones at a time.

25. (Amended) The method of claim 18

wherein a maximum number of telephones from the plurality of telephones [is a maximum number of telephones that] can be coupled to the telecommunications interface; and

wherein a peak voltage of the ringing drive voltage is provided to [powers ringers of] no more than approximately one half of the maximum number of telephones at a time.

26. (Amended) The method of claim 25 wherein the peak voltage of the ringing drive voltage is provided to [powers ringers of] no more than approximately one third of the maximum number of telephones at a time.

27. (Amended) The method of claim 26 wherein [the] a ring signal derived from the ringing drive voltage has a duty cycle of less than approximately 33 percent.

28. The method of claim 18 wherein the first operational drive voltage has a magnitude approximately twice a magnitude of the second operational drive voltage.